

REMARKS

In accordance with the foregoing, claim 21 has been added. No new matter has been added. Claims 1-21 are pending and under consideration.

Rejections under 35 U.S.C § 101

On pages 2 and 3 of the Office Action mailed August 2, 2007, claims 1-20 were rejected under 35 U.S.C § 101. The Office Action stated that the "ability to 'design knowledge' is not a practical application" and that the "result has to be a practical application" in lines 2-3 of page 3. The Office Action did not support its broad assertion that generating classes and subclasses from a super class is not statutory and the Applicants submit that support for this assertion cannot be found, in case law or even the MPEP. Furthermore, even if the test set forth on page 3 of the Office Action is applied, claims 1-15 recite statutory subject matter. The Office Action asserted that there was no practical application that included "transforming ... [a] physical thing ... or hav[ing] the FINAL RESULT ... achieve or produce a useful ..., concrete ..., AND tangible ... result" (Office Action, page 3, emphasis in original) recited in the claims. Contrary to this assertion, claims 1, 6, 11 and 16 each recite transforming a physical thing by "storing in a database" (*e.g.*, claim 1, line 7).

Furthermore, the method performed upon execution of the program encoded on the computer readable medium recited in claim 1 ends by "configuring the product's hierarchical structure from information stored in the database and the relationship between the components obtained by the inference." The preamble of claim 1 recites "a knowledge processing system formed by a product's hierarchical structure of its components information" (claim 1, lines 3-4) and the first operation recited in claim 1 is "storing in a database the product's development code name as a super class having a name inclusively describing a component as a class of the component information ..." (claim 1, lines 7-8). Thus, "configuring the product's hierarchical structure" as recited at the end of claim 1 requires a physical change in the data stored in the database. It is submitted that making changes in a database is a practical application, as databases are widely used in the real world for many purposes.

Furthermore, claim 11 is directed to a system which includes "a storage unit" (claim 11, line 5) and "an inference unit ... detecting a class ... generating a relationship between the components by an inference based on multivalued logic, and configuring a knowledge structure from information stored in the database ..." (claim 11, lines 9-11). It is clear from the specification, that "the relationship between new classes obtained as a result of the inference by

a computer can be a part of the knowledge structure" (application, page 9, lines 2-4); thus, the "inference unit" (claim 11, line 9) of a "components information processing system" (claim 1, line 1) should be interpreted as "a personal computer, a work station, etc." (application, page 2, lines 11-12). The rejection under 35 U.S.C § 101 did not cite any reason why a system comprising hardware that includes a storage unit and a personal computer is not statutory subject matter.

Claim 16 recites "storing relationships between the classes and the super class and between classes in a database" at lines 5-6 and "storing the new relationship in the database" in the last line. It is submitted that storing information in a database both "transform[s] ... [a] physical thing" by changing the contents of the physical storage medium in which the database is stored and "ha[s] the FINAL RESULT ... achieve or produce a useful ..., concrete ..., AND tangible ... result" by making changes to the database and using the database in a manner described, for example, by the embodiments of the specification.

For the above reasons, it is submitted that claims 1, 6, 11 and 16, as well as claims 2-5, 7-10, 12-15 and 17-20 which depend therefrom, are directed to patentable subject matter.

Rejections under 35 U.S.C § 112

On pages 4-8 of the Office Action, a number of rejections under 35 U.S.C. § 112 were issued to various combinations of claims. Each of those rejections is traversed individually below and reconsideration is respectfully requested.

On pages 4 and 7 of the Office Action, claims 2, 7 12 and 17 were rejected under the first paragraph of 35 U.S.C. § 112 for failing to comply with the written description requirement. One embodiment of how "weight" is computed is described on page 13, lines 15-16, of the specification as using fuzzy logic and is known to one of ordinary skill in the art.

On page 5 of the Office Action, claims 1, 2, 4, 6, 7, 9, 11 and 12 were rejected under the first paragraph of 35 U.S.C. § 112 for failing to comply with the written description requirement. In particular the Office Action describes confusion regarding "components" and "relationships" as described in the specification, but fails to provide clear reasoning why an issue under the first paragraph of 35 U.S.C. § 112 was present. The Examiner is respectfully requested to provide additional detail beyond a vague reference to paragraph 13 (presumably from the specification) in regards to what confusion exists between "components" and "relationships".

In addition, the embodiments described in the specification discuss the use of the claims to inform a user how each component is related to other components when a product is modeled and how to structure each component, due to the relationships. Moreover, since a multi-valued

logic is used, the relationships between components or elements can be described flexibly. For example, when a thermal design of a hardware product is modeled, the relationship of temperatures around the components or elements will be multi-valued (e.g., an alarm temperature and safe temperature will vary depending on the opinion of a specialist, therefore the value stored may be a range of values).

On page 5 of the Office Action, claims 3, 8 and 12 were rejected under the first paragraph of 35 U.S.C. § 112 for failing to comply with the written description requirement. As stated in section 2163.02 of the Manual of Patent Examining Procedure ("MPEP"), the "subject matter of the claim need not be described literally (*i.e.* using the same terms or *in haec verba*) in order for the disclosure to satisfy the description requirement". Therefore, the Office Action's allegation that the phrase "associate components by the inference" does not appear in the specification does not present *prima facie* evidence to reject the claims under the first paragraph of 35 U.S.C. § 112 for failing to comply with the written description requirement.

Starting on page 5, claims 5, 10 and 15 were rejected under the first paragraph of 35 U.S.C. § 112 for failing to comply with the written description requirement. However, as stated in section 2163.04 of the MPEP, the Office Action fails to describe why one skilled in the art would conclude the inventors were not in possession of the phrase "restructured by an inference" as recited in the claims.

On page 6 of the Office Action, claims 4, 14 and 19 were rejected under the first paragraph of 35 U.S.C. § 112 for failing to comply with the written description requirement. As stated in section 2163.02 of the MPEP, the "subject matter of the claim need not be described literally (*i.e.* using the same terms or *in haec verba*) in order for the disclosure to satisfy the description requirement". Therefore, the Office Action's allegation that the phrase "temporal inference on a component" or "temporal inference process" does not appear in the specification does not present *prima facie* evidence to reject the claims under the first paragraph of 35 U.S.C. § 112 for failing to comply with the written description requirement.

On page 7 of the Office Action, claim 16 was rejected under the first paragraph of 35 U.S.C. § 112 for failing to comply with the written description requirement. As stated in section 2163.02 of the MPEP, the "subject matter of the claim need not be described literally (*i.e.* using the same terms or *in haec verba*) in order for the disclosure to satisfy the description requirement". Therefore, the Office Action's allegation that the word "root" does not appear in the specification does not present *prima facie* evidence to reject the claims under the first paragraph of 35 U.S.C. § 112 for failing to comply with the written description requirement.

On page 7 of the Office Action, claims 1, 2, 5, 6, 7, 10, 11, 12, 15-18 was rejected under the first paragraph of 35 U.S.C. § 112 for failing to comply with the written description requirement. Multi-valued logic is discussed on the bottom page 23 of the specification and it is submitted that one of ordinary skill in the art would understand "multivalued logic" as described in the specification.

On page 4 of the Office Action claims 4, 9, 14 and 19 were rejected under the second paragraph of 35 U.S.C. § 112 for use of the terms "change with time" and "taken into account" as recited, for example on lines 3-4 of claim 4. The Office Action referred to the lack of specificity regarding "the length of the window of time" and the non-existence of a "taken into account" algorithm" (Office Action, page 4, lines 10-11). It is submitted that the level of specificity required in the Office Action is not required by the second paragraph of 35 U.S.C § 112.

The last 3 lines of claim 4 recites "a relationship between components changing over time with described component's information taken into account, is included in the component's information structure" and similar limitations are now recited in claims 9 and 14. It is submitted that this limitation is a proper broad recitation of the component's information structure. As stated in the title of section 2173.04 of the MPEP, "Breadth Is Not Indefiniteness" and, therefore, withdrawal of the rejection is respectfully requested.

On page 8, claims 1-19 were rejected under the second paragraph of 35 U.S.C. § 112 as being indefinite for failing to particularly point out and distinctly claim the subject matter regarded as the invention. In particular, the Office Action alleged the specification defined both "structure" and "relationship" similarly. The Office Action cites an incomplete phrase from the Specification and takes the phrase out of context. With respect to the term "structure" the Office Action interprets the phrase "Description of a structure (use case, class, interface, component, collaboration)" on page 3, lines 3-4 as a definition of structure, whereas one skilled in the art would understand that a structure could be defined using a "use case, class, interface, component, collaboration" from reading the specification. Similarly, the Office Action interprets the phrase "Description of a relationship (use case, class, interface, component, collaboration)" on page 3, lines 9-10 as a definition of a relationship, whereas one skilled in the art would understand that a relationship could be defined using a "use case, class, interface, component, collaboration" from reading the specification. Withdrawal of the rejection is respectfully requested.

Prior Art Rejections

In the Office Action, starting at page 9, claims 1-20 were rejected under 35 U.S.C. § 102 in view of "Java in a Nutshell" by David Flanagan (hereinafter "Flanagan"). This rejection is traversed and reconsideration is requested.

Flanagan teaches that an "object can be converted to the type of subclass, but this is a narrowing conversion and requires a cast" on page 80, lines 31,32. In contrast, independent claims 1, 6, 11, 15 and new claim 21 each recite "generating a ... relationship ... by a multivalued logic inference process" (e.g., claim 1, lines 11-12). Nothing has been cited in Flanagan that anticipates a "multivalued logic inference process" as recited in the claims. Therefore, it is submitted that claims 1, 6, 11, 15 and 21 as well as claims 2-5, 7-10, 11-14 and 16-20, which depend on one thereof, are patentably distinguishable over Flanagan.

Request for Examiner Interview

If the foregoing arguments are not found sufficient to overcome the outstanding rejections, the Examiner is respectfully requested to contact the undersigned to schedule an Examiner Interview. In addition, the Examiner is respectfully requested to contact the undersigned before preparing the next Office Action, to arrange an Examiner Interview and allow submission of a supplemental Amendment, if necessary.

Conclusion

There being no further outstanding objections or rejections, it is submitted that the application is in condition for allowance. An early action to that effect is courteously solicited.

Finally, if there are any formal matters remaining after this response, the Examiner is requested to telephone the undersigned to attend to these matters.

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If there are any additional fees associated with filing of this Amendment, please charge the same to our Deposit Account No. 19-3935.

Respectfully submitted,

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